REMARKS

Claims 1-37 are presented for further examination. Claims 1, 9, 18, 19, 26-28, and 36 have been amended.

In the second non-final Office Action mailed September 29, 2004, the Examiner withdrew the previous rejection under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,400,659 ("Barron et al."). Claims 1-37 have now been rejected under 35 U.S.C. § 103(a) as obvious over Barron et al. in view of U.S. Patent No. 5,734,257 ("Schauder et al."). In remarks accompanying the rejection, the Examiner acknowledges that Barron et al. fail to disclose a compensation device as set forth in the claims, but the Examiner asserts that such compensation device is taught by Schauder et al.

Applicant respectfully disagrees with the basis for the rejection and requests reconsideration and further examination of the claims.

The disclosed and claimed embodiments of the present invention are as set forth in the previous Amendment, which applicant incorporates herein in its entirety by reference. More particularly, the present invention addresses the deficiency in previous compensation circuits wherein harmonics in a current configuration (current harmonics) cause in an electrical network voltage adverse harmonics that affect in a negative way the quality of the voltage in the electrical network.

The present invention therefore addresses harmonic reactive powers that are to be compensated, as described more fully at page 6, lines 24-27 of the present application. More particularly at page 7, lines 20-27, the compensation device of the present invention is described as producing "...the required harmonics in order to compensate for the harmonic reactive power in the electrical network." In the arrangement of the present invention, the network voltage is measured "...by means of the voltage transformer 18 and the evaluation device 20," which serve to "detect which harmonics are contained in the voltage configuration." In response to such measurement, "...the harmonic currents in the electrical network 10 produce at the network impedance voltage drops corresponding to the frequency and amplitude thereof." In other words, "the values which are measured and calculated in that way are predetermined for the inverter 16 as current reference values. The inverter 16 then produces, in accordance with the

reference values, the current harmonics with the required frequencies, amplitudes and phase positions."

As the Examiner acknowledges, nowhere does Barron et al. address the claimed aspect of the present invention of adapting a reactive power component in respect of its phase and/or amplitude and in respect of its frequency. In addition, there is no mention that the reactive power component is adapted to compensate for the reactive power in the consumer.

Schauder et al., U.S. Patent No. 5,734,257, are directed to a transmission line power controller with a continuously controllable voltage source responsive to real power demand and a reactive power demand. Schauder et al. describe a transmission line power control circuit that is used to specify a desired real power demand and reactive power demand for a transmission system (*see*, *e.g.*, Abstract, column 1, lines 35-48; column 2, lines 25-28; and column 3, lines 31-33). This information is processed by the power control circuit in Schauder et al. to produce a voltage source reference signal in response to which an injected voltage vector is produced into the transmission system. This injected voltage vector forces the transmission line current vector to desired value corresponding to the specified real power and reactive power demand. Thus, desired real power and reactive power flow is rapidly achieved on the transmission system.

More particularly, Schauder et al. state at column 4, lines 59-61, that "The automatic control of an injected series voltage vector to maintain a demand P, Q condition on a transmission line is believed to be a new concept." Continuing from line 66 through to column 5, line 10, Schauder et al. describe instead "the power control circuit 52 uses closed-loop feedback control along with P and Q demands to continuously calculate the necessary injected voltage vector to control the transmission line current." At lines 9-10, Schauder et al. conclude with "the power control circuit uses established techniques to control the parallel inverter 22." This is clearly in distinction and in contrast to the present invention, which does not use established techniques to control an inverter. There is no teaching or suggestion in Schauder et al. of addressing the harmonic needs of the reactive power demands of the consumer by adapting the frequency of the reactive power component as does the present invention.

However, this solution is different than the solution proposed by the present invention. There is no mention in Schauder et al. that the reactive power component shall be adapted in respect of its phase and/or amplitude and in respect of its frequency to the consumer to compensate for the harmonic reactive power in the consumer. These important differences have already been addressed in the prior amendment and are emphasized here again with respect to Schauder et al.

Thus, the combination of Barron et al. with Schauder et al. does not lead to the present invention. There is no teaching or suggestion to one of ordinary skill to consider or combine Schauder et al. with Barron et al. to achieve the claimed combination. Moreover, while Barron et al. talks about a wind power installation, Schauder et al. has nothing to do with such a wind power installation. Even if one of ordinary skill would make the combination suggested by the Examiner, he would not find a method of reactive power regulation in an electrical network that addresses or compensates for the harmonic reactive power in the consumer.

Turning to the claims, independent claims 1, 9, 18, 19, 26, 27, and 28 have all been amended to more clearly distinguish the present invention over the cited references. In particular, these claims have been amended to recite that the regulation of the compensation device is so that the electrical power delivered to the consumer has a reactive power component that is adapted in respect of its phase and/or amplitude and in respect of its frequency to the consumer to compensate for the harmonic reactive power in the consumer. As discussed above, nowhere do Barron et al. or Schauder et al., taken alone or in any combination thereof teach or suggest adapting the reactive power component in respect of its phase and/or amplitude and in respect of its frequency to the consumer to compensate for the harmonic reactive power in the consumer. In view of the foregoing, applicant respectfully submits that all of the claims in this application are clearly in condition for allowance.

In the event the Examiner disagrees or finds minor informalities that can be resolved by telephone conference, the Examiner is urged to contact applicants' undersigned representative by telephone at (206) 622-4900 in order to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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